Docket No.: PAZ-178CPCN Group Art Unit: 1625 Examiner: C.C. Chang

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of the claims and listing of the claims in the application:

### 1.-15. (Cancelled)

#### 16. (Previously Presented) A tetracycline compound of formula (III):

wherein:

J<sup>5</sup> and J<sup>6</sup> are each independently hydrogen, alkyl, alkenyl, alkynyl, aryl, sulfonyl, acyl, alkoxycarbonyl, alkaminocarbonyl, alkaminothiocarbonyl, substituted thiocarbonyl, substituted carbonyl, alkoxythiocarbonyl, or linked to form a ring;

J<sup>7</sup> and J<sup>8</sup> are each alkyl, halogen, or hydrogen;

X is  $CR^6R^6$ :

R<sup>2</sup>, R<sup>2</sup>, R<sup>4</sup>, and R<sup>4</sup> are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

> R<sup>4</sup> is NR<sup>4</sup>'R<sup>4</sup>", alkyl, alkenyl, alkynyl, aryl, hydroxyl, halogen, or hydrogen; R<sup>3</sup>, R<sup>10</sup>, R<sup>11</sup> and R<sup>12</sup> are each hydrogen or a pro-drug moiety;

R<sup>5</sup> is hydroxyl, hydrogen, thiol, alkanoyl, aroyl, alkaroyl, aryl, heteroaromatic, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, alkyl carbonyloxy, or aryl carbonyloxy;

R<sup>6</sup> and R<sup>6</sup> are each independently hydrogen, methylene, absent, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R<sup>7</sup> is hydrogen, ethyl, phenyl, 4-t-butylphenyl, t-butylaminophenyl or dimethylamino;

R<sup>8</sup> is hydrogen, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R<sup>13</sup> is hydrogen, hydroxyl, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl; and pharmaceutically acceptable salts thereof.

- 17. (Original) The tetracycline compound of claim 16, wherein R<sup>4</sup> is NR<sup>4</sup>'R<sup>4</sup>", X is CR<sup>6</sup>R<sup>6</sup>'; R<sup>2</sup>, R<sup>6</sup>, R<sup>6</sup>, R<sup>8</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup> are each hydrogen; R<sup>4</sup>' and R<sup>4</sup>" are lower alkyl; and R<sup>5</sup> is hydroxyl or hydrogen.
- 18. (Original) The tetracycline compound of claim 17, wherein  $R^{4'}$  and  $R^{4''}$  are each methyl and  $R^{5}$  is hydrogen.
- 19. (Original) The tetracycline compound of claim 16, wherein  $J^7$  and  $J^8$  are hydrogen.
- 20. (Original) The tetracycline compound of claim 16, wherein  $J^5$  is substituted or unsubstituted alkyl.
- 21. (Original) The tetracycline compound of claim 16, wherein J<sup>5</sup> is sulfonyl.
- 22. (Original) The tetracycline compound of claim 16, wherein  $J^5$  and  $J^6$  are linked to form a ring.
- 23. (Original) The tetracycline compound of claim 16, wherein J<sup>5</sup> is heteroaryl.
- 24. (Original) The tetracycline compound of claim 16, wherein J<sup>5</sup> is substituted carbonyl.
- 25. (Previously Presented) The tetracycline compound of claim 16, wherein said compound is selected from the group consisting of:

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wherein

R is substituted or unsubstituted alkyl, alkenyl, alkynyl, halogen, alkoxy; and Y is N, O, or S, or pharmaceutically acceptable salts or prodrugs thereof.

26. (Currently Amended) A tetracycline compound selected from the following:

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- or a pharmaceutically acceptable salt thereof.
- 27. (Previously Presented) A pharmaceutical composition comprising an effective amount of a tetracycline compound of any one of claims 16, 25 or 26, and a pharmaceutically acceptable carrier.
- 28. (Original) The pharmaceutical composition of claim 27, wherein said effective amount is effective to treat a tetracycline responsive state.

#### 29.-42. (Cancelled)

43. (Previously Presented) The compound of claim 16, wherein R<sup>7</sup> is dimethylamino.

44. (Previously Presented) The compound of claim 16 or 24, wherein J<sup>6</sup> is alkyl.

45. (Currently Amended) The compound of claim 44, wherein said compound is

, and pharmaceutically acceptable salts

thereof.

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46. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

(New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

48. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

49. (New) The compound of claim 16, wherein said compound is

and pharmaceutically acceptable salts thereof.

**50.** (New) The compound of claim 16, wherein said compound is

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#### 51. (New) The compound of claim 16, wherein said compound is

and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 52.

and pharmaceutically acceptable salts thereof.

#### 53. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 54.

and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 55.

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### 56. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 57. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 58. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 59. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 60. (New) The compound of claim 16, wherein said compound is

## 61. (New) The compound of claim 16, wherein said compound is

## 62. (New) The compound of claim 16, wherein said compound is

## 63. (New) The compound of claim 16, wherein said compound is

## 64. (New) The compound of claim 16, wherein said compound is

### 65. (New) The compound of claim 16, wherein said compound is

## 66. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 67. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 68. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 69. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 70. (New) The compound of claim 16, wherein said compound is

### 71. (New) The compound of claim 16, wherein said compound is

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## 72. (New) The compound of claim 16, wherein said compound is

## 73. (New) The compound of claim 16, wherein said compound is

## 74. (New) The compound of claim 16, wherein said compound is

## 75. (New) The compound of claim 16, wherein said compound is

## 76. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 77. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 78. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 79. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 80. (New) The compound of claim 16, wherein said compound is

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## 81. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 82. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 83. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 84. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 85. (New) The compound of claim 16, wherein said compound is

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#### (New) The compound of claim 16, wherein said compound is 86.

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 87.

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 88.

, and pharmaceutically acceptable salts thereof.

#### 89. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 90.

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## 91. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 92. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 93. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 94. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 95. (New) The compound of claim 16, wherein said compound is

### 96. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 97. (New) The compound of claim 16, wherein said compound is

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, and pharmaceutically acceptable salts thereof.

### 98. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 99. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 100. (New) The compound of claim 16, wherein said compound is

## 101. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 102. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 103. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 104. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 105. (New) The compound of claim 16, wherein said compound is

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106. (New) The compound of claim 16, wherein said compound is

107. (New) The compound of claim 16, wherein said compound is

108. (New) The compound of claim 16, wherein said compound is

(New) The compound of claim 16, wherein said compound is

(New) The compound of claim 16, wherein said compound is

### 111. (New) The compound of claim 16, wherein said compound is

## 112. (New) The compound of claim 16, wherein said compound is

## 113. (New) The compound of claim 16, wherein said compound is

### 114. (New) The compound of claim 16, wherein said compound is

### 115. (New) The compound of claim 16, wherein said compound is

### 116. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 117. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 118. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 119. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

### 120. (New) The compound of claim 16, wherein said compound is

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#### (New) The compound of claim 16, wherein said compound is 121.

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is . 122.

### (New) The compound of claim 16, wherein said compound is

#### 124. (New) The compound of claim 16, wherein said compound is

#### (New) The compound of claim 16, wherein said compound is 125.

#### (New) The compound of claim 16, wherein said compound is 126.

## 127. (New) The compound of claim 16, wherein said compound is

### 128. (New) The compound of claim 16, wherein said compound is

### 129. (New) The compound of claim 16, wherein said compound is

## 130. (New) The compound of claim 16, wherein said compound is

## 131. (New) The compound of claim 16, wherein said compound is

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#### (New) The compound of claim 16, wherein said compound is 132.

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, and pharmaceutically acceptable salts thereof.

#### 133. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is 134.

, and pharmaceutically acceptable salts thereof.

### (New) The compound of claim 16, wherein said compound is

and pharmaceutically acceptable salts thereof.

### (New) The compound of claim 16, wherein said compound is

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#### 137. (New) The compound of claim 16, wherein said compound is

and pharmaceutically acceptable salts thereof.

#### 138. (New) The compound of claim 16, wherein said compound is

and pharmaceutically acceptable salts thereof.

## (New) The compound of claim 16, wherein said compound is

and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is · 140.

, and pharmaceutically acceptable salts thereof.

#### (New) The compound of claim 16, wherein said compound is

### 142. (New) The compound of claim 16, wherein said compound is

### 143. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

# 144. (New) The compound of claim 16, wherein said compound is

## 145. (New) The compound of claim 16, wherein said compound is

## 146. (New) The compound of claim 16, wherein said compound is

### 147. (New) The compound of claim 16, wherein said compound is

## 148. (New) The compound of claim 16, wherein said compound is

## 149. (New) The compound of claim 16, wherein said compound is

### 150. (New) The compound of claim 16, wherein said compound is

## 151. (New) The compound of claim 16, wherein said compound is

## 152. (New) The compound of claim 16, wherein said compound is

, and pharmaceutically acceptable salts thereof.

## 153. (New) The compound of claim 16, wherein said compound is

### 154. (New) The compound of claim 16, wherein said compound is

## 155. (New) The compound of claim 16, wherein said compound is

### 156. (New) The compound of claim 16, wherein said compound is

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# 157. (New) The compound of claim 16, wherein said compound is